

Olympia Oyster Enhancement and Restoration in Tomales Bay:

Request for a Working Group



Photo Courtesy of Oregon Department of Fish and Wildlife

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Greater Farallones National Marine Sanctuary
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Why Consider Enhancement and Restoration?

- Community interest
- The benefit of oysters as living shorelines
- Addressing oyster decline
- To ensure success of demonstration projects – we need to learn more on:
 - Status of oyster threats
 - Optimal areas for restoration
 - Spatial limitations





Photo Credit:
*Pacific Coast
Science and
Learning Center*



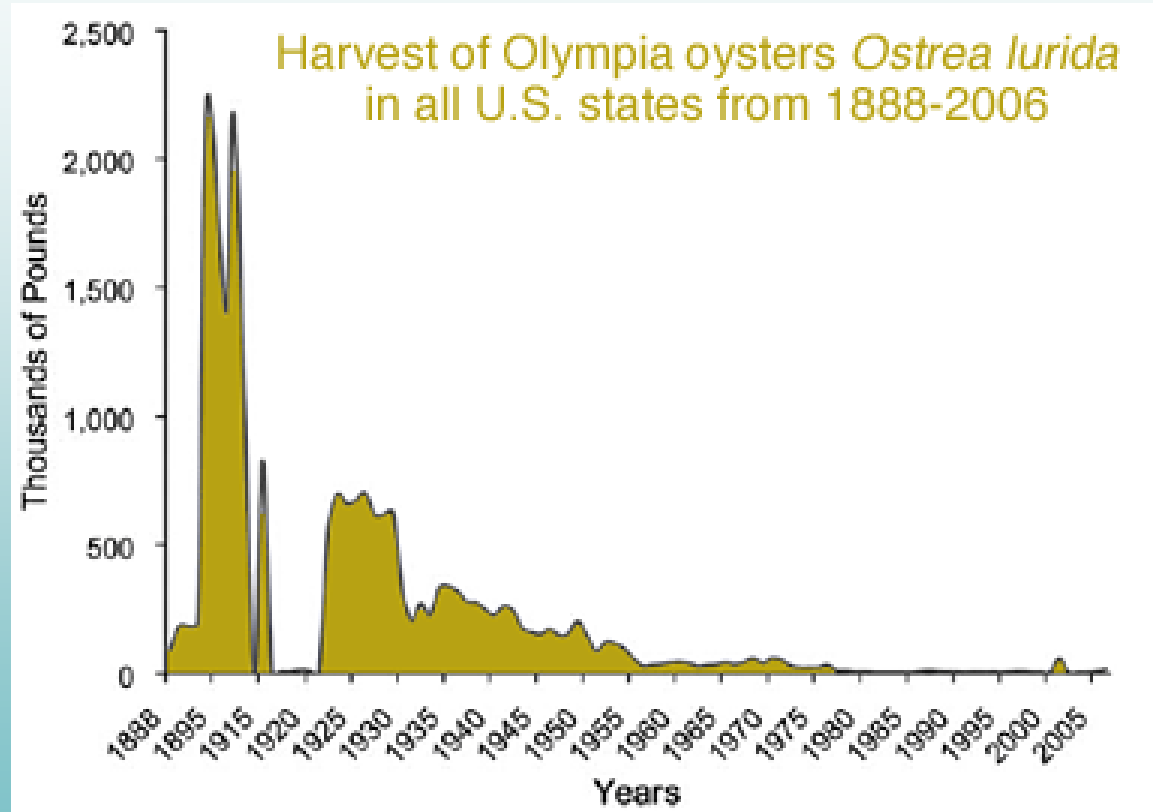
**NATIONAL MARINE
SANCTUARIES**

Olympia Oysters & Living Shorelines: The Timing is Right to Implement Community-Based Plans/Reports

- **Greater Farallones Climate Adaptation Plan**
 - *Strategy–LS-1.1: Identify locations within estuaries that are currently impacted by flooding and erosion, where nature-based shoreline protection projects could have co-benefits for natural systems and human communities...*
- **Sonoma-Marin Coastal Regional Sediment Management Report**
 - *Site 11A: Tomales Bay Zone – Marshall –Explore pilot project for living shoreline using native oyster shells to reduce wave impacts.*
- **Marin Ocean Coast Sea Level Rise Adaptation Report**
 - *Priority Action: near- to medium-term: Restoring and enhancing living shorelines along Tomales Bay...where possible implement demonstration projects, including ..offshore reefs and native oyster beds*

Olympia Oysters Restoration: Addressing the Decline

- Although the historical extent of the decline is not well documented in Tomales Bay, the West Coast population of Olympia oysters has declined.
- There is little relevant data available that shows the historic range in the bay prior to aquaculture and sedimentation, but there is information that can help determine locations for enhancement.



Species of Concern: Olympia Oyster



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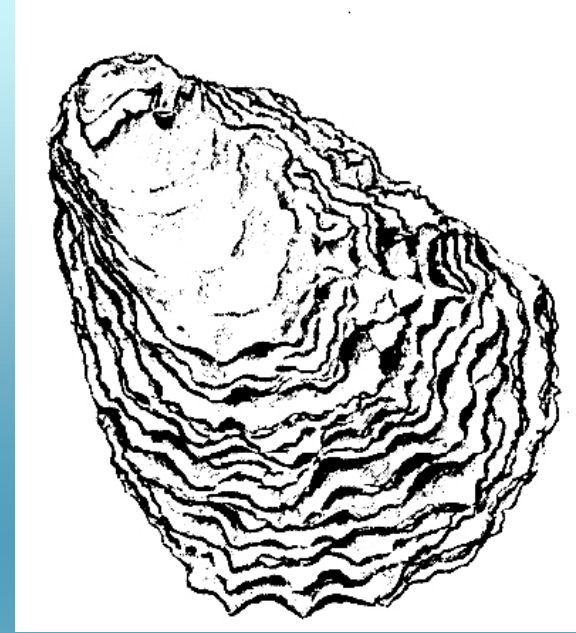


Photo courtesy of the Washington Department of Fish and Wildlife.

Olympia Oysters are a native foundation species whose range is now limited due to human activities. The services provided, e.g. water quality enhancement, habitat provision, and biodiversity enhancement merit consideration for restoration.



Enhancing and Restoring Olympia Oysters while Addressing Issues of Concern

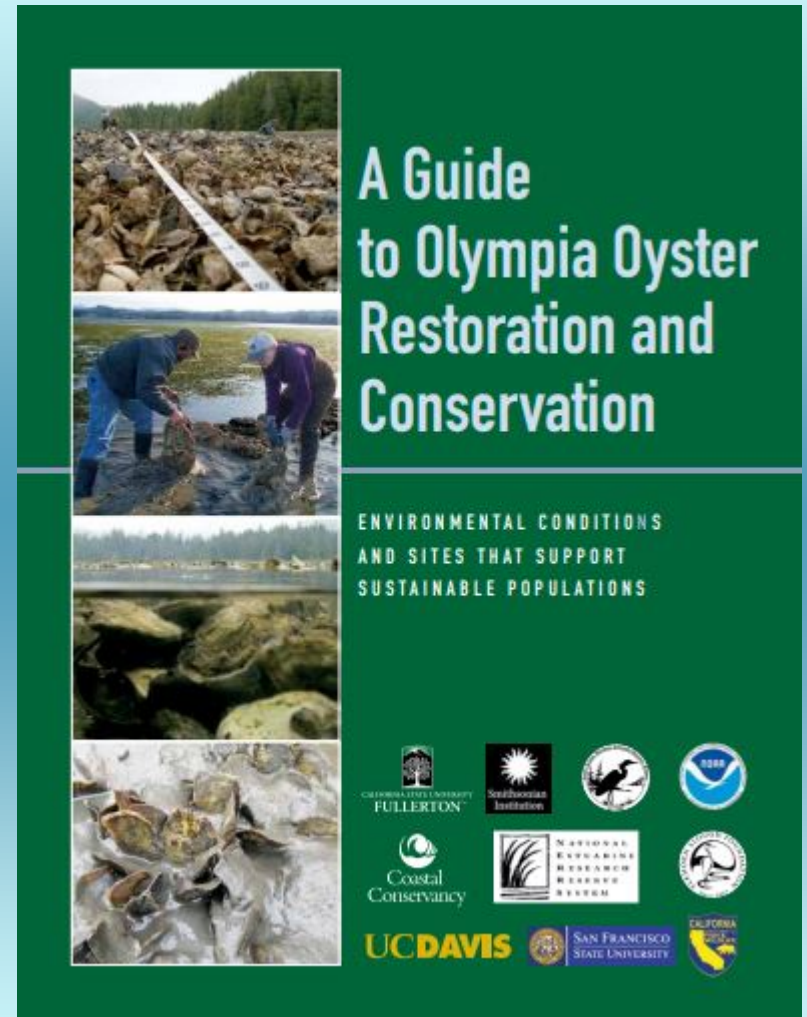
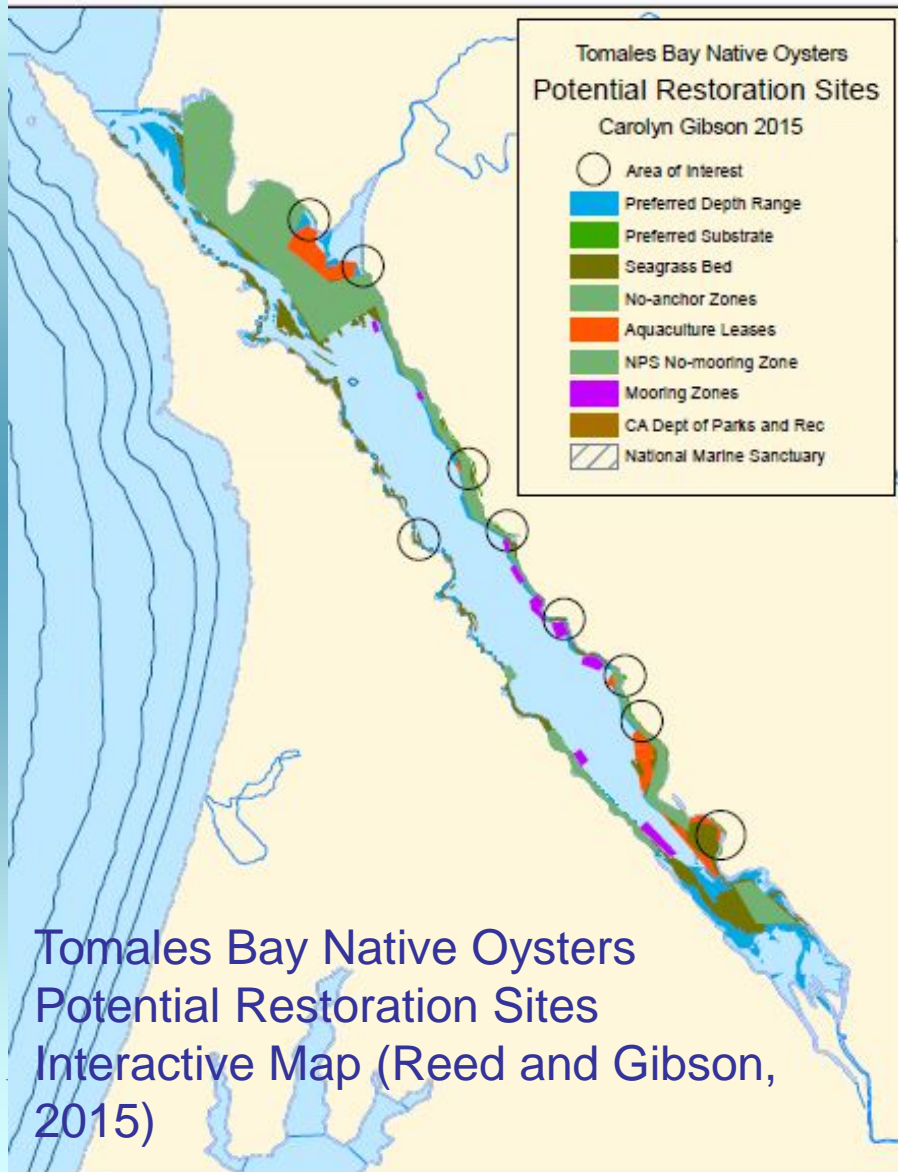
We know the threats!

Olympia oysters face three major threats in Tomales Bay, which are ocean acidification, sedimentation, and invasive species.

- These threats need to be considered when determining if and/or where oyster enhancement and restoration can occur.
- These three threats can influence the success of any demonstration project.

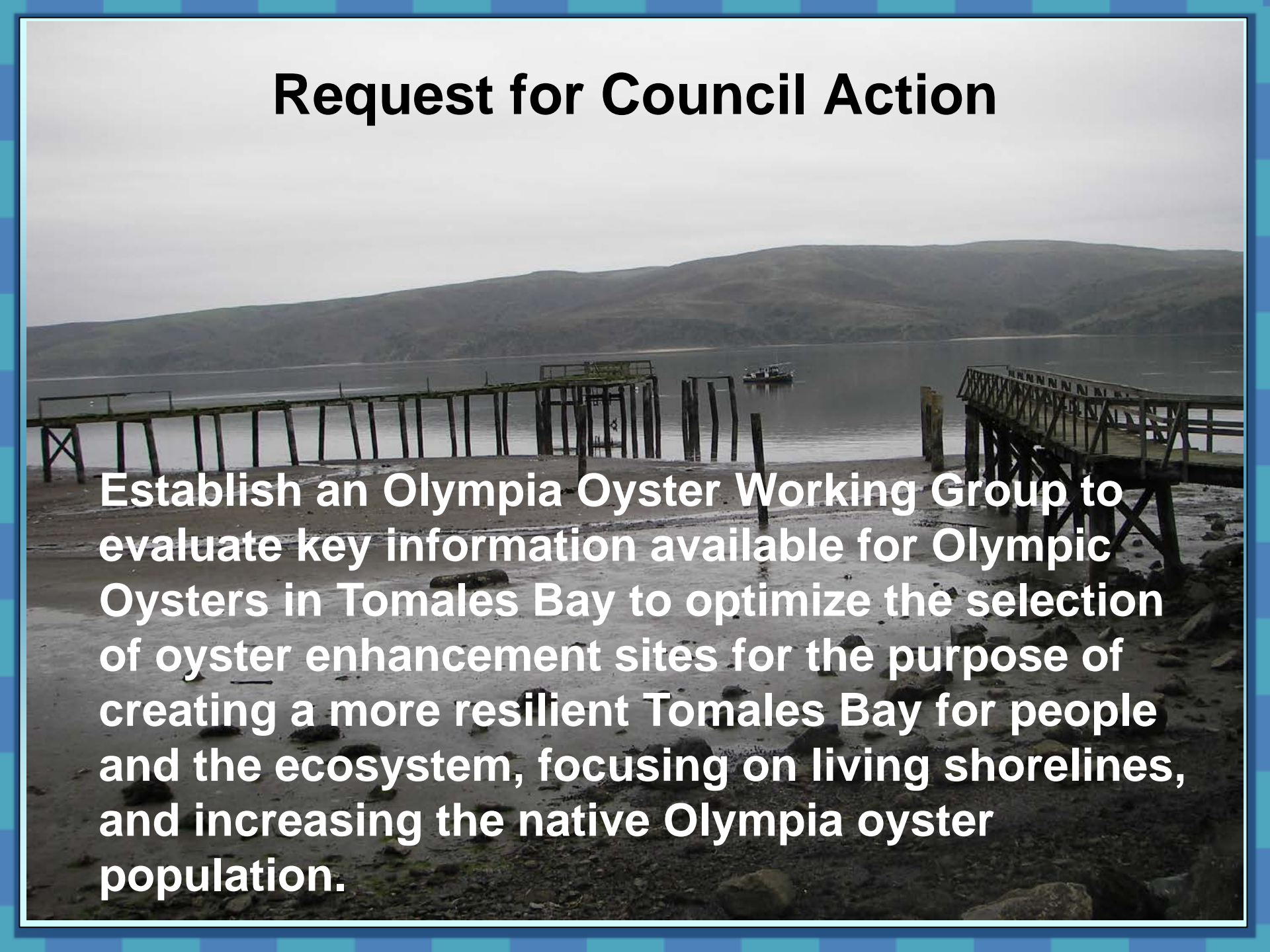


We Have Tools in the Toolbox.



Wasson et al., 2014

Request for Council Action

A photograph of Tomales Bay, California, showing a wide expanse of water with several wooden piers extending into it. The piers are made of weathered wood and some have small structures on top. In the background, there are rolling hills under a cloudy sky. A small boat is visible in the water. The foreground is a rocky and sandy shoreline.

Establish an Olympia Oyster Working Group to evaluate key information available for Olympic Oysters in Tomales Bay to optimize the selection of oyster enhancement sites for the purpose of creating a more resilient Tomales Bay for people and the ecosystem, focusing on living shorelines, and increasing the native Olympia oyster population.